

Amendments to the Claims

This listing of claims will replace all prior listings of claims in the application.

Listing of Claims

1. (Canceled)

2. (Currently Amended) A drilling tool having a basic body ~~(14)~~ rotatable about a drill axis ~~(36)~~, having two insert seats ~~(16)~~ arranged in the point region of the basic body ~~(14)~~, and having interchangeable inserts ~~(20)~~ which are interchangeably inserted into the insert seats ~~(16)~~, face one another at a central insert corner ~~(46)~~ over the drill axis ~~(36)~~ while leaving a center gap ~~(60)~~ clear, and have a main cutting edge ~~(28)~~, extending from a radially outer guide bevel ~~(34)~~ up to the central insert corner ~~(46)~~, and a respective rake face ~~(30)~~ and flank ~~(24)~~ which meet in the region of the main cutting edge ~~(28)~~ while forming a cutting wedge, the main cutting edges ~~(28)~~ of the interchangeable inserts ~~(20)~~ complementing one another in the region of a central, angled cutting-edge part ~~(28')~~ to form a chisel edge interrupted by the center gap ~~(60)~~, the interchangeable inserts ~~(20)~~, at their flank ~~(24)~~, having an inclined deflecting chamfer ~~(56)~~ running from an apex line ~~(54)~~, starting from the region of their central cutting-edge part ~~(28')~~, up to the central insert corner ~~(46)~~, the flanks ~~(24)~~ being inclined positively ~~(7)~~ in the feed direction in the radially outer region in such a way as to complement one another in an arrow-like manner and negatively ~~(8)~~ in the feed direction toward the center gap ~~(60)~~ in the region of their deflecting chamfers ~~(56)~~ in such a way as to complement one another in a funnel-like manner, ~~characterized in that~~ wherein the interchangeable inserts have a locating surface ~~(26)~~ remote from the rake face ~~(30)~~ and a through-opening ~~(44)~~, passing through the rake face ~~(30)~~ and the locating surface ~~(26)~~, for a fastening element ~~(22)~~, and ~~in that~~ the apex line ~~(54)~~ starts from a position within the

central cutting-edge part ~~(28')~~ and runs to an insert edge ~~(50)~~ on the bearing-surface side, and the basic body, in the region of the center gap between the insert seats, has a concave contour which is axially set back relative to the insert seats.

3. (Currently Amended) The drilling tool as claimed in claim 1, ~~characterized in that~~ wherein the rake-face sections ~~(30)~~ belonging to the central and the radially outer cutting-edge part of the main cutting edge ~~(28)~~ enclose a chisel-edge angle ~~(α)~~ of less than 70° in the transition region.

4. (Currently Amended) The drilling tool as claimed in claim 3, ~~characterized in that~~ wherein the chisel-edge angle ~~(α)~~ is 20° to 40° .

5. (Currently Amended) The drilling tool as claimed in claim 3, ~~characterized in that~~ wherein the transition edge region between the two rake-face sections ~~(30)~~ is rounded.

6. (Currently Amended) The drilling tool as claimed in claim 1, ~~characterized in that~~ wherein the radially outer flank part ~~(24)~~ and the central deflecting chamfer ~~(56)~~ enclose an apex angle ~~(β)~~ less than 170° with one another in the region of the apex line ~~(54)~~.

7. (Currently Amended) The drilling tool as claimed in claim 6, ~~characterized in that~~ wherein the apex angle ~~(β)~~ is 120° to 160° .

8. (Currently Amended) The drilling tool as claimed in claim 1, ~~characterized in that~~ wherein the central deflecting ~~surface~~ chamfer ~~(56)~~ has a triangular outline defined by the apex line ~~(54)~~, a section of the central cutting-edge part ~~(28')~~ and a section of the adjacent insert edge ~~(50)~~.

9. (Currently Amended) The drilling tool as claimed in claim 8, ~~characterized in that~~wherein the height of the ~~central-deflecting surface (56)~~ chamfer of triangular outline, this height being measured between the apex line (54) and the insert corner (42), is a multiple of five to twenty times the width of the center gap (60), ~~preferably five to twenty times the width of the center gap (60).~~

10. (Currently Amended) The drilling tool as claimed in claim 2, ~~characterized in that~~wherein the ~~central-deflecting surface (56)~~ chamfer has a polygonal outline defined by the apex line (54), a section of the central cutting-edge part (28') and a section of the insert edge (50) on the bearing-surface side.

11. (Currently Amended) The drilling tool as claimed in claim 10, ~~characterized in that~~wherein the diameter of the ~~central-deflecting surface (56)~~ chamfer of polygonal outline, this diameter being measured between the apex line (54) and the central insert corner (46), is a multiple of five to twenty times the width of the center gap (60), ~~preferably five to twenty times the width of the center gap (60).~~

12. (Currently Amended) The drilling tool as claimed in claim 1, ~~characterized in that~~17, wherein the width of the center gap (60) ~~is~~ is less than 0.3 mm.

13. (Currently Amended) The drilling tool as claimed in claim 1, ~~characterized in that~~17, wherein those sections of the main cutting edges (28, 28') of the two interchangeable inserts (20) which correspond to one another enclose an angle with one another which is not equal to 180°.

14. (Currently Amended) The drilling tool as claimed in claim 13, ~~characterized in that~~wherein the ~~angular offset relative to~~angle enclosed between the main cutting edges varies from 180° ~~is~~by between 1° and 4°.

15. (Currently Amended) The drilling tool as claimed in claim 1, ~~characterized in that~~ 17, wherein the two inserts (20) are offset axially from one another.

16. (Currently Amended) The drilling tool as claimed in claim 15, ~~characterized in that~~ wherein the axial offset is in the order of magnitude of 1/100 mm, preferably 0.005 mm to 0.05.01 mm.

17. (Currently Amended) ~~The drilling tool as claimed in claim 1, characterized in that~~ A drilling tool having a basic body rotatable about a drill axis, having two insert seats arranged in the point region of the basic body, and having interchangeable inserts which are interchangeably inserted into the insert seats, face one another at a central insert corner over the drill axis while leaving a center gap clear, and have a main cutting edge, extending from a radially outer guide bevel up to the central insert corner, and a respective rake face and flank which meet in the region of the main cutting edge while forming a cutting wedge, the main cutting edges of the interchangeable inserts complementing one another in the region of a central, angled cutting-edge part to form a chisel edge interrupted by the center gap, the interchangeable inserts, at their flank, having an inclined deflecting chamfer running from an apex line, starting from the region of their central cutting-edge part, up to the central insert corner, the flanks being inclined positively in the feed direction in the radially outer region in such a way as to complement one another in an arrow-like manner and negatively in the feed direction toward the center gap in the region of their deflecting chamfers in such a way as to complement one another in a funnel-like manner, the interchangeable inserts having a locating surface remote from the flank and a through-opening, passing through the flank and the locating surface, for a fastening element, and the deflecting chamfer being inclined in the direction of the respective locating surface, wherein the apex line starts from a position within the central cutting-edge part and runs to an opposite insert edge, the

central cutting-edge part and the opposite insert edge meeting in the central insert corner, and wherein

the basic body ~~(14)~~, in the region of the center gap ~~(60)~~ between the insert seats, has a concave contour ~~(72)~~ which is axially set back relative to the insert seats.

18. (Currently Amended) The drilling tool as claimed in claim 1, ~~characterized in that~~ wherein one of the insert seat ~~(16)~~ and the interchangeable insert ~~(20)~~ have indentations, for engaging one inside the other in a complementary manner, for producing radial interlocking.

19. (Currently Amended) ~~The drilling tool as claimed in claim 1, characterized in that~~ A drilling tool having a basic body rotatable about a drill axis, having two insert seats arranged in the point region of the basic body, and having interchangeable inserts which are interchangeably inserted into the insert seats, face one another at a central insert corner over the drill axis while leaving a center gap clear, and have a main cutting edge, extending from a radially outer guide bevel up to the central insert corner, and a respective rake face and flank which meet in the region of the main cutting edge while forming a cutting wedge, the main cutting edges of the interchangeable inserts complementing one another in the region of a central, angled cutting-edge part to form a chisel edge interrupted by the center gap, the interchangeable inserts, at their flank, having an inclined deflecting chamfer running from an apex line, starting from the region of their central cutting-edge part, up to the central insert corner, the flanks being inclined positively in the feed direction in the radially outer region in such a way as to complement one another in an arrow-like manner and negatively in the feed direction toward the center gap in the region of their deflecting chamfers in such a way as to complement one another in a funnel-like manner, the interchangeable inserts having a locating surface remote from the flank and a through-opening, passing through the flank and the locating surface, for a fastening element, and the deflecting chamfer being inclined

in the direction of the respective locating surface, wherein the apex line starts from a position within the central cutting-edge part and runs to an opposite insert edge, the central cutting-edge part and the opposite insert edge meeting in the central insert corner, and wherein

the interchangeable inserts ~~(20)~~, with their bearing surfaces ~~(48, 64)~~ remote from the rake face ~~(30)~~ and with their locating surface ~~(26)~~, bear against complementary seating surfaces of the insert seat, in that the bearing surfaces ~~(48, 64)~~, via a respective locating bevel ~~(68, 70)~~ forming a channel-like clearance space ~~(80)~~ with the adjacent seating surfaces of the insert seat ~~(16)~~, merge into the locating surface ~~(26)~~, and ~~in that~~ wherein a cooling channel ~~(84, 86)~~ which is arranged in the basic body ~~(16)~~ and to which a cooling lubricant can be admitted opens into each insert seat in the region of the channel-like clearance space ~~(80)~~.

20. (Currently Amended) A drilling tool having a basic body ~~(14)~~ rotatable about a drill axis ~~(36)~~, having two insert seats ~~(16)~~ arranged at the end face in the basic body ~~(14)~~, and having interchangeable inserts ~~(20)~~ which are interchangeably inserted into the insert seats ~~(16)~~, face one another at a central insert corner ~~(46)~~ over the drill axis ~~(36)~~ while leaving a center gap ~~(60)~~ clear, and have a main cutting edge ~~(28)~~, extending from a radially outer guide bevel ~~(34)~~ up to the central insert corner ~~(46)~~, a respective rake face ~~(30)~~ and flank ~~(24)~~ which meet in the region of the main cutting edge ~~(28)~~ while forming a cutting wedge, a locating surface ~~(26)~~ remote from the flank ~~(24)~~ and a through-opening ~~(44)~~, passing through the flank ~~(24)~~ and the locating surface ~~(26)~~, for a fastening element ~~(22)~~, the main cutting edges ~~(28)~~ of the interchangeable inserts ~~(20)~~ complementing one another in the region of a central, ~~preferably~~ angled cutting-edge part ~~(28')~~ to form a chisel edge interrupted by the center gap ~~(60)~~, ~~characterized in that~~ wherein the interchangeable inserts ~~(20)~~, with their bearing surfaces ~~(48, 64)~~ remote from the rake face ~~(30)~~ and with their locating surface ~~(26)~~, bear against complementary seating surfaces of

the insert seat, in that the bearing surfaces ~~(48, 64)~~, via a respective locating bevel ~~(68, 70)~~ forming a channel-like clearance space ~~(80)~~ with the adjacent seating surfaces of the insert seat ~~(16)~~, merge into the locating surface ~~(26)~~, and ~~in that~~ a cooling channel ~~(84, 86)~~ which is arranged in the basic body ~~(16)~~ and to which a cooling lubricant can be admitted opens into each insert seat in the region of the channel-like clearance space ~~(80)~~.

21. (Currently Amended) The drilling tool as claimed in claim 20, ~~characterized in that~~wherein the channel-like clearance space ~~(80)~~ is open toward the center gap ~~(60)~~.

22. (Currently Amended) The drilling tool as claimed in claim 20, ~~characterized in that~~wherein the channel-like clearance space ~~(80)~~ is open toward the radially outer guide bevel ~~(34)~~.

23. (Currently Amended) The drilling tool as claimed in claim 20, ~~characterized in that~~wherein the bearing surfaces ~~(48, 64)~~, remote from the rake face ~~(30)~~, of the interchangeable insert and their locating bevels ~~(68, 70)~~ merge into one another via a rounded insert corner ~~(66, 69)~~.

24. (Currently Amended) The drilling tool as claimed in claim 23, ~~characterized in that~~wherein the cooling channel ~~(84, 86)~~ opens into the insert seat ~~(16)~~ in the vicinity of the rounded-off insert corner ~~(66)~~ via an orifice opening ~~(82)~~.

25. (Currently Amended) The drilling tool as claimed in claim 20, ~~characterized in that~~wherein the interchangeable inserts ~~(20)~~, in the region of their rake faces ~~(30)~~, have a chip-forming depression ~~(90)~~ adjoining at least part of the main cutting edge ~~(28, 28')~~.

26. (Currently Amended) The drilling tool as claimed in claim 25, ~~characterized in that~~wherein the chip-forming

depression ~~(90)~~ extends at least partly into the region of the central cutting-edge part ~~(28')~~.

27. (Currently Amended) The drilling tool as claimed in claim 25, ~~characterized in that~~wherein the chip-forming depression ~~(90)~~ extends into the region of the rake face ~~(30)~~ adjoining the deflecting chamfer.

28. (Currently Amended) The drilling tool as claimed in claim 27, ~~characterized in that~~wherein the chip-forming depression ~~(90)~~ extends right into the vicinity of the central insert corner.

29. (Currently Amended) The drilling tool as claimed in claim 25, ~~characterized in that~~wherein the chip-forming depression ~~(90)~~ extends up to the outer secondary cutting edge ~~(32)~~.

30. (Currently Amended) The drilling tool as claimed in claim 29, ~~characterized in that~~wherein the chip-forming depression ~~(90)~~ passes through the outer secondary cutting edge ~~(32)~~.

31. (Currently Amended) The drilling tool as claimed in claim 25, ~~characterized in that~~wherein the main cutting edge ~~(28)~~ and the chip-forming depression ~~(90)~~ are separated from one another by a bevel ~~(92)~~ running essentially parallel to the main cutting edge ~~(28)~~.

32. (Currently Amended) The drilling tool as claimed in claim 25, ~~characterized in that~~wherein the chip-forming depression ~~(90)~~ has a concave base surface.

33. (Currently Amended) The drilling tool as claimed in claim 25, ~~characterized in that~~wherein the chip-forming depression ~~(90)~~ has a partly cylindrical concave base surface.

34. (Currently Amended) The drilling tool as claimed in claim 20, ~~characterized in that~~wherein the main cutting edge ~~(28)~~ is interrupted by chip breaker notches ~~(96', 96'')~~ arranged at a distance from one another.

35. (Currently Amended) The drilling tool as claimed in claim 34, ~~characterized in that~~wherein the chip breaker notches ~~(96', 96'')~~ are arranged outside the central cutting-edge part ~~(28')~~.

36. (Currently Amended) The drilling tool as claimed in claim 34, ~~characterized in that~~wherein chip breaker notches are also arranged in the region of the central cutting-edge part ~~(28')~~.

37. (Currently Amended) The drilling tool as claimed in claim 20, ~~characterized in that~~wherein the secondary cutting edge (32) is oriented so as to run parallel to the drill axis or so as to diverge from the drill axis by an angle of up to 3°.

38-39. (Canceled)

40. (Currently Amended) The interchangeable insert as claimed in claim 39, ~~characterized in that~~41, wherein the deflecting chamfer ~~(56)~~ has a triangular outline defined by the apex line ~~(54)~~, a section of the central cutting-edge part ~~(28')~~ and a section of the adjacent insert edge ~~(50)~~.

41. (Currently Amended) ~~The interchangeable insert as claimed claim 38, characterized in that~~ An interchangeable insert for double-cutting drilling tools, having a main cutting edge which runs from an outer insert corner up to an inner insert corner, having a respective rake face and flank which adjoin the main cutting edge while forming a cutting wedge, having a locating surface arranged on the insert side remote from the flank, and having a through-opening, passing through the flank and the locating surface, for a fastening

element, the flank having a deflecting chamfer which runs from an apex line, arranged in the region between through-opening and inner insert corner, up to the inner insert corner and is inclined in the direction of the locating surface, wherein the apex line starts from a position within a central cutting-edge part and runs to an opposite insert edge, the central cutting-edge part and the opposite insert edge meeting in the inner insert corner, and wherein a relieved portion (58) is arranged in the region of the central inner insert corner (46) on the side of the locating surface (26).

42. (Currently Amended) The interchangeable insert as claimed in claim 41, ~~characterized in that~~wherein the outer flank part (24) containing the through-opening (44) and the deflecting chamfer (56) enclose an apex angle (β) of less than 170° with one another in the region of the apex line (54).

43. (Currently Amended) The interchangeable insert as claimed in claim 42, ~~characterized in that~~wherein the apex angle (β) is 120° to 160°.

44. (Currently Amended) ~~The interchangeable insert as claimed in claim 38, characterized in that~~An interchangeable insert for double-cutting drilling tools, having a main cutting edge which runs from an outer insert corner up to an inner insert corner, having a respective rake face and flank which adjoin the main cutting edge while forming a cutting wedge, having a locating surface arranged on the insert side remote from the flank, and having a through-opening, passing through the flank and the locating surface, for a fastening element, the flank having a deflecting chamfer which runs from an apex line, arranged in the region between through-opening and inner insert corner, up to the inner insert corner and is inclined in the direction of the locating surface, wherein the apex line starts from a position within a central cutting-edge part and runs to an opposite insert edge, the central cutting-edge part and the opposite insert edge meeting in the inner insert corner, and wherein

the locating surface ~~(26)~~ merges via locating bevels ~~(68, 70)~~ into adjacent bearing surfaces ~~(48, 64)~~ remote from the rake face ~~(30)~~.

45. (Currently Amended) The interchangeable insert as claimed in claim 44, ~~characterized in that~~wherein the bearing surfaces ~~(48, 64)~~ remote from the rake face ~~(30)~~ and their locating bevels ~~(68, 70)~~ merge into one another via a rounded insert corner ~~(66, 69)~~.

46-61. (Canceled)